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ABSTRACT

The influence of family background, including parental education, on college student attrition was evaluated with first- and second-generation American students. A total of 701 enrolled students and those who left before graduation were surveyed at a primarily residential private liberal arts college and at a primarily commuter state-supported liberal arts college. It was found that first-generation students approach the college experience with about the same degree of normative congruence as second-generation students with regard to their expectations. They value higher education for the intellectual growth and for the career preparation they anticipate receiving. In respect to a second aspect of social integration, structural or affiliational integration, first-generation students were at a disadvantage in comparison to the students whose parents had significant experience with the college or university setting. First-generation students suffer from a lower level of structural integration since they are less likely to live on campus, be involved in campus organizations, meet or pursue their most important friendships on campus, or work on campus. As for academic integration, first-generation students appear to have equally high aspirations regarding level of education they expect to attain, but those who withdraw are not as strongly convinced that college is the only or best route to life success. First-generation students appear to have lower congruity between their values toward education and their parents' values; receive less support of all types from their parents; and have heavier job loads. These factors increase their vulnerability to attrition. A bibliography is appended. (SW)

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In Search of the Silken Purse:
Factors in Attrition among First-Generation Students

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In Search of the Silken Purse:

Factors in Attrition among First-Generation Students¹

Introduction

The old saying that you can't make a silk purse out of a sow's ear contravenes another closely held bit of American folk wisdom: regardless of your birthright, if you work hard and get a good education, you can improve your social status.

The facts lend credence to the second version of social mobility. Indeed, the chances of finding the silk purse are much greater if one successfully completes a degree in higher education (Berg, 1970; Ornstein, 1971; Jencks, 1973; Solomon and Wales, 1973). Family income is highly correlated with occupation, which in turn is in large part determined by education.² This relationship has not been lost on thousands of students from lower socioeconomic status backgrounds who have entered college in growing proportions since the 1920's (see Nelson and Besag, 1970).

Substantial evidence exists that many of these so-called "new students" - - who include many women, minorities, and older persons - - are different on some important variables compared to traditional college-goers. One significant factor is that such students disproportionately come from families where neither parent experienced a college education.

First-Generation Students and Attrition

Student persistence has long been associated with parental educational levels. As Haller and Portes point out, "Education, and to a lesser extent, occupational attainment, in turn are viewed as causally dependent on parental status" (1973:62). We have found at least twenty separate references to original research conducted during the past 40 years which strongly documents this association. The present research underscores the validity of these findings.

Yet, very few studies have focused specifically on the dynamics of the

interaction between parental education and student persistence or attrition. We know that first-generation students are overrepresented among those who leave their first college, and who leave college for good, particularly during or just after their first year (Stanfiel, 1973). We do not know exactly how and why lack of parental experience with higher education serves to make their children, at whatever age, such a highly vulnerable group. Thus, although the move toward democratization of American higher education is clear, it appears as well that the legacy of parental aspirations and expectations may reinforce the stratification selection mechanisms that operated in the past (Spady, 1970: 68-69). This legacy may create hidden barriers to the ability of their children to use education as a pathway of upward mobility. The present study is designed to identify some of these barriers and to explore how they work to make first-generation students more vulnerable to attrition.

Research Design and Procedures

The research was undertaken at a primarily residential private liberal arts college and a primarily commuter state-supported liberal arts college. Like most colleges, they both have experienced an increase in the proportion of non-traditional students in the last few years, many of whom are first-generation.

Data for the study were collected through a survey of enrolled students ("persisters") and those who had left the schools prior to graduation ("leavers"). Interviews with persisting students have provided additional information to help explain the process through which family influences interact with the educational experience. Total number of respondents was 701, an overall response rate of 55 per cent.

Data Analysis

As many researchers have correctly pointed out, the effects of parental education on attrition are contaminated by issues of general family SES, intell-

igence, personality factors, child-rearing practices, cultural milieu, race, sex, etc. We agree with Spady (1970) that no one model can account for all of the variance in attrition rates. Consequently, we have utilized recent models of integration developed by Spady (1970); Tinto (1975); Pascarella and Terenzini (1979); congruence as defined by Feldman and Newcomb (1969) and Cope and Hannah (1975); Haller and Portes' work on status attainment (1973); and Goffman's theory of role embracement (1961) in order to place our findings into a viable theoretical context.

I. SOCIAL INTEGRATION

We use as measures of social integration normative congruence and structural integration, both of which reflect the impact of parental education.

1. Normative Congruence: Intellectual Orientation vs. Career Preparation

The question of whether first-generation students, as we refer to them, hold the requisite values for academic success is a complex one. The enormous and relatively rapid influx of these students, who by all accounts appear to be more career-oriented than interested in learning for learning's sake, has evoked much debate over the validity and relevance of a liberal arts education (Kaplan, 1980) or education of the "whole person." First-generation college students typify in their everyday lives conflict between liberal and career education. For them, it is not mere intellectual debate. It strongly influences their chances of completing a college education.

When asked, "What do you hope to gain from receiving a college education?" the first-generation student in general was about as likely as the second-generation to name some form of intellectual development, and slightly less likely to cite career, job, or money. As Tables 1 and 3 demonstrate, there is no significant difference in the responses of first- and second-generation students in regard to their educational goals: intellectual growth, career

preparation, personal growth and independence, a degree, and prestige/success/upward mobility. It is interesting to observe, however, that among persisters (Table 1) 55 per cent of the second-generation students say they hope to gain career preparation whereas only 45 per cent of the first-generation students emphasize career goals.³

Tables 1 and 2 about here

Like the persisters, the leavers want college to prepare them for careers, with intellectual growth running a distant second as the perceived benefit of their education (see Table 2). (It should be noted that career/job/money goals range from between 45 per cent and 56 per cent of total response for all groups). The importance of career goals is given even greater strength with the finding that over 80 per cent of all students in the study agree with the statement that "college courses should emphasize skills you can use on the job." A third measure of intellectual orientation was found in response to the following statement: "If you get a college degree, you will get a better job." Again we find that there is no significant difference between the first- and second-generation students. Over half of all the students in the study agreed with the statement. However, second-generation students were more likely to be in agreement among both persisters and leavers. Furthermore, both categories of persisters were more likely to agree than were any of the leavers (Table 3).

Table 3 about here

In summary, the three measures of normative congruence result in no evidence of significant difference between first- and second-generation students. In terms of the benefits they expect to receive from college, the content of the courses they take and the assumed value of a college degree,

both first- and second-generation students are in clear agreement that it is the job at the end of the line that is the most important consideration.

2. Structural Integration (affiliation)

This concept refers to the extent to which the student is tied into various facets of campus life, beyond attending classes.

A primary aspect of structural integration is residence on campus. Here the differences between first and second-generation students are very clear (see Table 4). First-generation students are much more likely to live off campus with their parents or with spouses while second-generation students are far more likely to live in residence halls. This is true for persisters and it was true for leavers when they were enrolled (Chi squares 50.26, sig. = .0000 and 5.92, sig. = .05, respectively).

Another measure of structural integration is involvement in campus organizations. While over half of all second-generation persisters were members of one or more campus organizations, only 38 per cent of the first-generation persisters claimed such memberships. We found little difference in the participation levels of first- and second-generation leavers. First-generation students, both persisters and leavers, who took part in campus organizations at all participated in few of them (Chi square 16.20, sig. = .0063). This finding suggests that Astin's argument that high involvement students are more likely to persist must be tempered by consideration of the student's parental educational level (cf. Astin, 1978:21).

Residence on campus is a doubly important component of structural integration especially, we suggest, at colleges where residence hall living is the norm (see Tables 4 and 5). Commuting students are relative "outsiders". Whether due to other commitments, demands placed on organization members, meeting times, or ostracism from resident students, a major source of inte-

gration is not utilized by commuting and first-generation students at either school.

Tables 4 and 5 about here

At the primarily commuting college used in this study, it appears that while residence hall students report more participation than commuting students, their involvement is less than that of resident students at a primarily residential campus. This is true even for second-generation students. (The fact that commuters are more susceptible to attrition has been documented many times. See, for example, Cope and Hannah, 1975.)

It should be noted that persisters in general more often report that their best friends are currently enrolled in college than do leavers. This supports the notion that social integration facilitates persistence. Among both persisters and leavers, first-generation students are least likely to have their best friends in college and most likely to have their best friends in work. Second-generation students, on the other hand, tend to have their best friends currently enrolled in college. We hypothesize, then, that second-generation students are much less likely to suffer from social isolation and the loneliness associated with it (cf. Weiss, 1973).

Employment plays a major role in the lives of many college students today. Over half the students at both schools in our study engage in some type of employment while attending classes during the school year. Eighty per cent of all first-generation students work as do 77 per cent of the second-generation students. The difference between the two groups is not in whether they work, but in the nature and extent of that employment. While 23 per cent of first-generation persisters work over 35 hours per week, only 14 per cent of second-generation persisters are in that position. As for those who had withdrawn from college, twice the proportion of both first-

and second-generation students reported working full time during their last term of enrollment (see Table 6). Although we cannot know from this data whether full-time employment led the student to withdraw or whether the decision to withdraw led the student to seek full time employment, the association between employment and attrition is clear.

Table 6 about here

Full-time employment generally means an off-campus work site and off-campus employment is a major centrifugal force in the lives of those students who hold such jobs. Even when the employment is part-time, these jobs entail time spent commuting from school to work or home to work, take students out of the institutional context, and generally compete with classwork for primacy in their lives. This means that first-generation students are less integrated into campus life through work than are second-generation students, a point to which we will return later.

This issue is magnified by the fact that second-generation students, both persisters and leavers are more likely to meet their best friends in college than are first-generation students. First-generations, regardless of retention, are most likely to meet their best friends at work. Thus, the ties to the institution are weakened further by their ties to the outside world.

II. ACADEMIC INTEGRATION

This refers to the student's attitude toward higher education as a meaningful enterprise. One measure of academic integration is the highest degree toward which the individual aims. We asked this question directly. The first-generation students in this sample appear to hold approximately the same aspirations for their educational careers as do the second-generation students.

A second indicator of academic integration is the extent to which the student believes a bachelor's degree is necessary for success. Agreement to this statement signifies commitment to the educational process. There is no meaningful difference between persisters by generation in perception of college as an important key to success. Belief in college as necessary for success was significantly higher for second-generation leavers, however. (This may reflect their higher rate of transfer vs. dropping out.) First-generation college leavers appear to have been less academically integrated than their second-generation counterparts.

On integration, then, we see that first-generation students have equally high educational aspirations, but somewhat lower perception of college as the key road to success. Let us look now at some of the factors that may serve as barriers in making their aspirations a reality.

III. INTERVENING FACTORS

1. Support from Significant Others

The new values and behaviors that first-generation students must develop if they are to achieve their long-term goals of secure white collar or professional jobs carry some degree of conflict with the norms of their families and peers in the community of origin. Evidence of this conflict is found in a set of ten questions tapping attitudes toward higher education. Students were asked to answer first in terms of their own beliefs and second according to the views they think their parents hold on the same issues. These items collectively measure the students' perceptions of the differences between their own and their parents' attitudes.

The perceived discrepancy - - in the form of a "congruence" scale score ranging from 0 to 40 - - was then related to the level of parental education through a simple regression. The result is an inverse relationship (Chi Square = .03, sig. = .000). That is, the lower the parental education, the

higher the incongruity between the student's values and perception of parental values.

Low congruence is significantly associated for persisters with low levels of both father's and mother's education (Chi Square = .028, sig. = .0000 and Chi Square = .034, sig. = .0000, respectively). Conversely, high congruence students are far more likely to have parents with higher educational levels. This same relationship holds true for leavers in relation to mother's education only (Chi Square = .019, sig. = .0370).

Handling these conflicts is made more difficult when family members are less than completely supportive of the educational objectives of the student. Our research shows that most parents are perceived as at least moderately emotionally supportive. However, second-generation persisters felt their parents are most enthusiastically behind their college aspirations. Only 61 per cent of all first-generation students said their parents were emotionally supportive compared to 73 per cent of the second-generation students (Chi Square = 10.40, sig. = .0055). Among students who have withdrawn from college, only 50 per cent of first-generation students claim emotional support from their parents, as compared to 70 per cent for second-generation students (Chi Square = 7.71, sig. = .0212). Furthermore, even though 60 per cent of the first-generation students checked off emotional support, second-generation students chose a far greater percentage of other support items such as help with finances, homework, typing, transportation, etc., indicating a broader range of parental support for second-generation students (Chi Square = 38.88, sig. = .0000 for persisters; 28.14, sig. = .0004 for leavers).

2. Institutional Context

As for type, cost, curriculum and program offerings, some researchers (Cope and Hannah, 1975; Astin, 1977) have argued that attrition is a conseq-

uence of lack of "institutional fit." That is, institutional characteristics mesh with personal characteristics either positively or negatively. If a student feels uncomfortable in college, cannot continue to afford tuition, desires a major offered elsewhere, this will increase the likelihood of withdrawal. Another interactive factor is native ability (or IQ), which to some extent determines academic performance, hence possible withdrawal. Some studies have found minor effect of such personality factors as maturity on chances of completing the degree.

More important than these factors, however, especially for first-generation students, are problems in balancing obligations arising from the simultaneous roles of student and worker. We saw earlier that first-generation students carry substantial work loads. First-generation leavers report that they are much more likely to give priority to the job when work hours conflict with course assignments. The importance of the conflict in these two roles becomes even more evident when we note that more of the first- than second-generation leavers expect to get at least a baccalaureate degree. They apparently value the education but are unable to devote the requisite time to ensure successful pursuit of their educational goals. For them, the "double role" of student/worker requires delicate juggling of time and resources.

To assess the impact of work location on commitment to job vs. school, we posed the following scenario:

It annoys your boss when you have to change your work schedule to fit in college activities. An interesting field trip is planned for your class. You should go on the trip and risk annoying your boss. (Answered on five point scale ranging from strongly agree/1 to strongly disagree/5).

Students working off-campus are somewhat more hesitant to go on the field trip and risk their employee-boss relationship. Classes have to be scheduled

around work hours, unexpected overtime cuts into study time (in some cases into class attendance), and students with off-campus jobs more often complain of too many "unnecessary" course-related assignments. In addition, among enrolled students who are employed, the more hours per week worked, the stronger the sense of responsibility toward work over school when a conflict arises (Chi Square = 68.24, sig. = .0000). Their time is relatively structured and inflexible (Malin, et al, 1980; Kuh and Ardaiole, 1979).

The fact that first-generation students are more likely to be employed for longer hours and off-campus (and to come from lower income levels) may explain our finding that they, in general, are more hesitant about risking the job for a course-related event. They see the demands of the job as more impelling than those of the classroom.

IV. CONSEQUENCES

1. Satisfaction with College:

Intellectual Satisfaction vs. Career Preparation

What do first-generation students say they find most rewarding, as opposed to their second-generation peers? Career preparation and the acquisition of job skills. Second-generation students score significantly higher on social life, family life, and the development of independence as rewards. This pattern holds true when we control for retention.

While first-generation students pay verbal homage to the importance of intellectual orientation, they are also more sensitive to the utility of career preparation through their college experience. Second-generation students, who claim to value career orientation, in fact report that college attendance gives them more reward in areas of personal growth.

We might hypothesize, then, that neither those who value career preparation, nor those who value intellectual development primarily, have their

values perfectly reinforced. The actual rewards of college shift their values in the opposite direction. This may affect, in turn, their commitment to college. Those who ideally value intellectual development but find their fellow students and perhaps teachers emphasizing career preparation may become disillusioned with the institution or with the process of higher education itself, and vice versa. (Longitudinal research would of course be necessary to validate this shift).

2. COMMITMENT TO COLLEGE

A. Role Embracement

Sociologist Erving Goffman has made a theoretical distinction between role embracement and role distance. A person who embraces a role plays it to its fullest potential, takes the full set of rights and obligations associated with the role, and invests him/herself emotionally in the role. It appears that first-generation students who drop out of higher education have less commitment to the role of student and thus do not join, do not socialize, and do not study hard. Dropping out then becomes the logical consequence of role distancing in a setting that demands role embracement (Goffman, 1961).

What evidence do we have for this conclusion? First, important distinctions are found between first- and second-generation students when we analyze the problems they report as salient to them.

First-generation students are more likely to select work conflict as a problem, while second-generation students are more likely to cite problems with living arrangements. (This may be a reflection of the higher proportion of second-generation students living in residence halls.) On all other problem areas - - finances, place to study, grades, difficulty with texts or writing papers, etc. - - there are no significant differences between the two groups. The first-generation students are telling us that in spite of their realization that education is important, they are essentially not free

to throw themselves into the student role. Rewards such as "personal growth" are as yet a luxury.

B. Academic Rewards

A secondary product of the first-generation student's time constraints and role distancing is poor grades: both persisters and leavers have slightly lower grades than do second-generation students. (Naturally, leavers, regardless of generation, are more likely to earn poor grades.) However, as Table 7 indicates, first-generation leavers have significantly lower grades than students in any other category. This leads us to suspect that first-generation students are most apt to have academic problems serious enough to force them to drop out, stop out, or transfer to an "easier" program - - and perhaps are most susceptible to nonvoluntary academic dismissal as well.

Table 7 about here

C. Institutional Commitment

We have found, as have other studies, that first-generation students are more likely to leave school before completing their education than are second-generation students. Furthermore, when first-generation students leave it is more often to take a full-time job rather than to transfer to another institution of higher education (see Table 8). Among students who have withdrawn, about one quarter of the second-generation students have transferred full-time to another college or university. Another 18 per cent continue part time, leaving only 57 per cent of all second-generation students in the true "drop-out" category. First-generation students do not fare as well: less than 10 per cent of them were enrolled full-time elsewhere at the time of our study; just over 15 per cent of them were enrolled either full or part time. This leaves 84 per cent of the first-generation students at the two colleges in

the study falling into the category of dropout, at least for the time being. In addition, 59 per cent of the first-generation former students report that they hold full-time jobs compared to less than 40 per cent of the second-generation students, (Chi Square = 7.13, sig. = .0283).

First-generation students are most likely to say they left school because of the cost (20 per cent). (This response must be taken with some suspicion, however, because several studies have shown that students tend to overinflate "financial" problems, rather than acknowledging that they feel alienated or have difficulty with academic work; see Spady, 1970.) Over half of the first-generation students (57 per cent) plan to return to the institution they left. This compares to only 40 per cent for second-generation students (Chi Square = 13.48, sig. = .0037). The major reason for second-generation students leaving is dissatisfaction with the college itself, its programs, or its course offerings (30 per cent).

This would suggest that lack of satisfaction and low institutional commitment are more salient factors in second-generation withdrawal. Lack of commitment to college in the form of role distancing, coupled with lower academic rewards, seems more important for students who are the first in their families to seek a college education.

According to Tinto's model (1975:92), a "lack of integration will lead to low commitment to that social system and will increase the probability that individuals will decide to leave college and pursue alternative activities." Although this statement most certainly reflects reality for many students, we feel that for first-generation students another process is also at work. External factors intervene between initial high commitment, and because of lack of time spent on campus, serve as a barrier to social integration. This in turn contributes to a lessening of commitment, producing withdrawal.

Finally, we concur with Tinto's conclusion that "the process of dropout

from college can be viewed as a longitudinal process of interactions between the individual and the academic and social systems of the college during which the person's experiences... continually modify his goal and institutional commitment in ways which tend to persistence and/or to varying forms of dropout" (1975:93).

CONCLUSION

We have seen that first-generation students approach the college experience with about the same degree of normative congruence as second-generation students with regard to their expectations. They value higher education for the intellectual growth and for the career preparation they anticipate receiving. The second aspect of social integration, structural or affiliational integration, finds the first-generation lacking in comparison to the student whose parents had significant experience with the college or university setting. Since first-generation students are less likely to live on campus, be involved in campus organizations, meet or pursue their most important friendships on campus, or work on campus, they suffer from a lower level of structural integration. And because they are far more likely than second-generations to work long hours, their chances of increasing structural integration are concomitantly lowered.

As for academic integration, first-generation students appear to have equally high aspirations regarding level of education they expect to attain, but those who withdraw are not as strongly convinced that college is the only or best route to life success. We might expect that since first-generation students are more integrated into the world of work - - off campus - - while they are students, they might be more likely to be given and to accept opportunities for occupational achievement which do not require formal degrees. Thus, their lack of social integration and lower academic integration combine to create a weak pull toward college, and a strong push away from it toward work situations. This is

borne out by our finding that when first-generation students leave higher education, it is more often than second-generation leavers to accept (or continue) full time employment.

These integrational discrepancies are aggravated for first-generation students by the fact that they appear to have lower congruity between their values toward education and their parents' values; receive less support of all types from their parents; are characterized by lower institutional commitment by virtue of their heavier work loads; and experience more acute work-school conflict. These intervening factors exacerbate the first-generation student's vulnerability to attrition. As we have seen, the first-generation student appears generally to be less committed to the process of higher education, to experience more frustration and conflict, and subsequently is more likely to leave the academic circle entirely than is the second-generation college-goer.

In conclusion, we have seen that the search for the silken purse, although a meaningful one for first-generation students, is made difficult by the fact that they are making a longer jump from the social status of their parents than are second-generation students. And they are making that jump with fewer resources and less support and positive role modeling from significant others.

Institutional policies and programs might be geared in the coming decades to assisting first-generation students in their quest for higher education. This would appear to mean lessening the financial burden carried by such students and their families; encouraging residential living; encouraging - - or even requiring - - participation in on-campus events and activities; providing more on-campus work study situations; and providing specific counseling and peer support mechanisms designed with such students in mind. The overall approach toward improving retention for first-generation students should be to increase their institutional commitment, improve their structural (affiliational) integration, and expand their support network in the academic setting.

TABLE 1

Benefits of College as Perceived by Persisters, by Generation

	<u>Intellectual Growth</u>	<u>Career Preparation</u>	<u>Personal Growth</u>	<u>Degree</u>	<u>Prestige, Success</u>	<u>Other</u>	<u>Row TOTAL</u>
First-generation	22.2 (58)	45.2 (118)	13.4 (35)	4.6 (12)	12.6 (33)	1.9 (5)	50.6% (261)
Second-generation	20.0 (51)	54.5 (139)	11.4 (29)	4.7 (12)	7.8 (20)	1.6 (4)	49.4% (255)
Column TOTAL	21.1 (109)	49.8 (257)	12.4 (64)	4.7 (24)	10.3 (53)	1.7 (9)	100% (N= 516)

Chi Square = 5.96 with 5 degrees of freedom Not significant

TABLE 2

Benefits of College as Perceived by Leavers by Generation

	<u>Intellectual Growth</u>	<u>Career Preparation</u>	<u>Personal Growth</u>	<u>Degree</u>	<u>Prestige, Success</u>	<u>Other</u>	<u>Row TOTAL</u>
First-generation	15.9	54.5	14.8	1.1	12.5	1.1	58.7%
	(14)	(48)	(13)	(1)	(11)	(1)	(88)
Second-generation	19.4	54.8	11.3	1.6	12.9	0.0	41.3%
	(12)	(34)	(7)	(1)	(8)	(0)	(62)
Column	17.3	54.7	13.3	1.3	12.7	0.7	100%
TOTAL	(26)	(82)	(20)	(2)	(19)	(1)	(N= 150)

Chi Square = 1.35 with 5 degrees of freedom

Not significant

TABLE 3

College Degree Important for Good Job by Retention and Generation

	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Row TOTAL</u>
Persisters				
1st generation	70.4 (190)	23.3 (63)	6.3 (17)	50.3 (270)
2nd generation	76.0 (203)	18.0 (48)	6.0 (16)	49.7 (267)
Column	73.9	20.7	6.1	100%
TOTAL	(393)	(111)	(33)	(N = 537) *
Withdrawals				
1st generation	58.3 (56)	29.2 (28)	12.5 (12)	59.3 (96)
2nd generation	66.7 (44)	22.7 (15)	10.6 (7)	40.7 (66)
Column	61.7	26.5	11.7	100%
TOTAL	(100)	(43)	(19)	(N = 162)**

* Chi Square = 2.47 with 2 degrees of freedom Sig. = .3 (not significant)

** Chi Square = 1.17 with 2 degrees of freedom Sig. = .713 (not significant)

TABLE 4
Residence by Participation in Campus Organizations
(Persisters, Primarily Residential Campus)

<u>Number of Campus Organizations Student Participated in</u>	<u>Residence Hall</u>	<u>Off-Campus, w/Parents</u>	<u>Off Campus, w/Spouse</u>	<u>Off Campus, Alone</u>	<u>Row TOTAL</u>
0	13.2 (16)	33.9 (41)	41.3 (50)	11.6 (14)	43.1 (121)
1	53.0 (35)	27.3 (18)	15.2 (10)	4.5 (3)	23.5 (66)
2	85.4 (41)	6.3 (3)	4.2 (2)	4.2 (2)	17.1 (48)
3	78.6 (22)	3.6 (1)	7.1 (2)	10.7 (3)	10.0 (28)
4	90.9 (10)	0.0 (0)	9.1 (1)	0.0 (0)	3.9 (11)
5	85.7 (6)	14.3 (1)	0.0 (0)	0.0 (0)	2.5 (7)
Column TOTAL	46.3 (130)	22.8 (64)	23.1 (65)	7.8 (22)	100% (N = 281)

Chi Square = 116.60 with 15 degrees of freedom.

Sig. = .0000

TABLE 5

Residence by Participation in Campus Organizations
(Persisters, Primarily Commuter Campus)

<u>Number of Campus Organizations Student Participated in</u>	<u>Residence Hall</u>	<u>Off-Campus, w/Parents</u>	<u>Off Campus, w/Spouse</u>	<u>Off Campus, Alone</u>	<u>Row TOTAL</u>
0	6.1 (11)	61.3 (111)	23.8 (43)	8.8 (16)	65.6 (181)
1	17.5 (11)	55.6 (35)	14.3 (9)	12.7 (8)	22.8 (63)
2	12.5 (3)	62.5 (15)	12.5 (3)	12.5 (3)	8.7 (24)
3	28.6 (2)	42.9 (3)	14.3 (1)	14.3 (1)	2.5 (7)
4	0.0 (0)	0.0 (0)	0.0 (0)	100 (1)	0.4 (1)
Column TOTAL	9.8 (27)	59.4 (164)	20.3 (56)	10.5 (29)	100% (N = 276)

Chi Square = 22.17 with 12 degrees of freedom

Sig. = .0356

TABLE 6

Hours Worked Per Week by Generation and Retention

	<u>Part Time</u> <u>(1-34 hrs.)</u>	<u>Full Time</u> <u>(35 hrs.+)</u>	<u>No Work</u>	<u>Row</u> <u>TOTAL</u>
Persisters				
1st generation	57.0 (155)	23.2 (63)	19.9 (54)	50.5 (272)
2nd generation	62.9 (168)	13.9 (37)	23.2 (62)	49.5 (267)
Column TOTAL	59.9 (323)	18.6 (100)	21.5 (116)	100.0% (N = 539) *
Leavers				
1st generation	36.5 (35)	53.1 (51)	10.4 (10)	58.9 (96)
2nd generation	52.2 (35)	23.9 (16)	23.9 (16)	41.1 (67)
Column TOTAL	42.9 (70)	41.1 (67)	16.0 (26)	100.0% (N = 163) **

* Chi Square = 7.79 with 2 degrees of freedom

Sig. = .0204

** Chi Square = 14.98 with 2 degrees of freedom

Sig. = .0006

TABLE 7

Academic Performance by Generation and Retention *

	<u>Poor</u>	<u>Average</u>	<u>High</u>	<u>Row TOTAL</u>
Persisters				
1st generation	54.4 (31)	49.3 (100)	50.5 (141)	50.5 (272)
2nd generation	45.6 (26)	50.7 (103)	49.5 (138)	49.5 (267)
Column TOTAL	10.6 (57)	37.7 (203)	51.8 (279)	100% (N = 539) **
Leavers				
1st generation	66.0 (35)	61.7 (29)	50.8 (32)	58.9 (96)
2nd generation	34.0 (18)	38.3 (18)	49.2 (31)	41.1 (67)
Column TOTAL	32.5 (53)	28.8 (47)	38.7 (63)	100% (N = 163)***

* Poor = a grade point average below 2.0

Average = 2.0-2.9

High = 3.0-4.0

** Chi Square = .46885 with 2 degrees of freedom Sig. = .7910 (not significant)

*** Chi Square = 2.97792 with 2 degrees of freedom Sig. = .2256
Kendall's Tau, B = 0.12501 Sig. = .0459

TABLE 8

Dropouts Enrolled at Other Institutions, by Generation

	<u>Enrolled Full time</u>	<u>Enrolled Part Time</u>	<u>Not Enrolled</u>	<u>Row TOTAL</u>
First-generation	9.4 (9)	6.3 (6)	84.4 (81)	58.9 (95)
Second-generation	25.4 (17)	17.9 (12)	56.7 (38)	41.1 (67)
Column	16.0	11.0	73.0	100%
TOTAL	(26)	(18)	(119)	N = 163 *

* Chi Square = 15.32 with 2 degrees of freedom.

Sig. = .0005

NOTES

1. We define first-generation students as those whose parents have had no college or university experience. They are, in other words, the first generation in their families to continue education beyond high school. A student is considered first-generation even if a sibling has attended college. Most studies which consider parental education do so as a continuous variable (eg., number of years of school). We treat it as a dichotomous variable - - no college vs. one or both parents having some college - - and as a trichotomous variable - - no college vs. one or both parents having some college, but no degree (2nd gen-S) vs. college graduate parents (2nd gen-G) in which case one or both parents attained the degree. In this way we have been able to test for absence vs. presence of parental experience in higher education, as well as for absence vs. presence of at least one parental role model of successful completion of the degree. The present paper includes tables for first-generation as a dichotomous variable only.

Our definition of first-generation differs from that utilized by so-called TRIO programs sponsored by the U.S. Office of Education (Upward Bound, Talent Search, and Special Services for Disadvantaged Students) and read into legislation of both the U.S. House of Representatives and the U.S. Senate. The concept of "first-generation" utilized therein was advocated by Fuji A.

Adachi in his paper, "Analysis of the First Generation College Student Population (A New Concept in Higher Education)," (no date, unpublished) and applies only to those students who do not have at least one parent college graduate.

He argues that first-generation status should be used in conjunction with low income in determining eligibility for TRIO programs. He states that while almost all low-income students are first-generation by the TRIO definition, not all first-generation students are low income. Our data support this assumption: Even though family income levels were generally lower for

the first-generation students (and higher for second-generation students), approximately half the first-generation students came from families with annual incomes of \$18,000 or higher. In addition, income alone has not been strong enough statistically in this study to predict attrition, since it is true that family income was generally lower for first-generation persisters as well as for first-generation leavers. Specifically, using the TRIO definition (which defines second-generation as a student with at least one college graduate parent), we find that 72.2 per cent of all low-income students in our sample (including both persisters and leavers) were first-generation. Conversely, of the first-generation students, only 20.7 per cent were in the low income category; 54.3 per cent were in the moderate income category; 23 per cent were in the above average category; and 2 per cent in the high income group. (Low income was defined in our study as \$5000. annual family income or lower. The relationship between low family income and first-generation status was significant at the .0000 level, Chi Square = 66.9029 with 9 degrees of freedom.)

2. Blau and Duncan (1967) found that the primary influence of parental status was on occupational attainment indirectly achieved through educational level. They found that education affects not only early occupational attainment (i.e., the first job), but also that the first job has a sizable effect on later jobs, thus patterning the individual's career line.
- 3 This finding contradicts expectations based on the literature which suggests that first-generation students are more career oriented. Although we find the present data curious and worthy of further exploration, it is possible that they are an artifact of the methodology. The question was presented in open-end format and coded according to the first "gain" mentioned by each respondent.

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